MISSOURI DEPARTMENT OF TRANSPORTATION
MATERIALS ENGINEERING
Jefferson City, Missouri

Test Method
MoDOT T66
AGGREGATE SAMPLE REDUCTION

1.0 Scope. This method covers the procedure for splitting sampled aggregate fractions down to the proper testing size.

2.0 Apparatus.

2.1 Sample Splitter meeting the requirements of AASHTO T 248.

2.2 Balance sensitive to 0.1 gram.

2.3 Trowel

2.4 Sample Pans - Approximate dimensions 450 mm by 330 mm by 100 mm.

2.5 Sieves - 37.5 mm, 25.0 mm, 19.0 mm, 12.5 mm, 9.5 mm, 4.75 mm, 2.36 mm, 1.18 mm, 600 µm, 300 µm, 150 µm and 75 µm.

3.0 Sample Aggregate.

3.1 Bituminous plant - Aggregate samples are to be obtained according to the Construction Manual.

3.2 Quarry - Aggregate samples are to be obtained according to the Materials Manual.

4.0 Procedure.

4.1 Split the aggregate into 2 sample pans using the sample splitter.

4.2 Place a clean pan on the floor. Take one of the sampled aggregate pans and pour one-quarter of the contents, over each of the four corners of the pan, into the center of the clean pan.

4.3 Using a trowel, push the coned material to the sides of the pan until a uniform thickness is achieved.

4.4 Repeat steps 4.1, 4.2 and 4.3 a minimum of 4 times. (Note: If the material is still segregated, continue mixing until it is no longer visibly segregated.)

4.5 With the long edge of the pan facing the splitter, slowly pour one-half of the contents through the splitter, making sure that none of the splitter chutes become clogged and that the contents of the pan are uniformly emptied into the splitter. Then pour the remaining half of the pan through the other side of the splitter in the same fashion.

4.6 Empty one splitter pan into a clean sample pan and set aside for testing. Empty the other splitter pan into a clean sample pan and set aside for reserve in case additional testing is needed.

4.7 Repeat steps 4.2 through 4.6 on the second pan of aggregate from step 4.1 but save the opposite side of the split for testing purposes this time.

4.8 Combine the two pans of material set aside for testing into a single pan and repeat steps 4.1 through 4.7.

4.9 Continue mixing and splitting the material until the proper sample size is attained. Weigh both halves of the final split. The split samples shall be within ± 3 percent. If the sample masses are not within this tolerance, combine, mix and split the sample again.

4.10 Periodic gradation analysis on both halves should be performed to check splitting accuracy. The gradations shall meet the following tolerances:

Sieves	Tolerances
37.5 mm - 4.75 mm	± 1.5%
2.36 mm - 300 µm	± 1.0%
150 µm - 75 µm	± 0.5%